Municipal Solid Waste Program

Developer: South Carolina Energy Research & Development Center
Contract Number: DE-AC21-96MC33115
Crosscutting Area: N/A

Subsurface Contaminants FOCUS AREA

Problem:

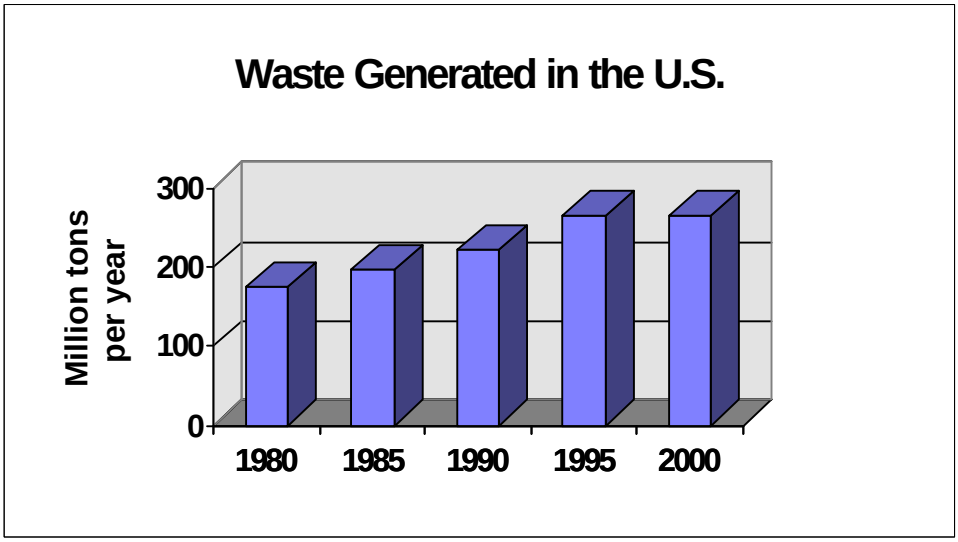
Municipal solid waste (MSW) is a growing concern throughout the world. MSW is produced at an average rate of 4 pounds per person per day in the United States. By the year 2000, over 265 million tons of MSW will be generated per year. Combine the millions of tons of industrial waste that is generated yearly and the problem is clearly what to do with all this waste.

Solution:

The most common method of handling waste streams is disposal in landfills. However, with property at a premium and the amount of waste increasing, landfilling is becoming more expensive and a less attractive alternative. Recycling and recovery methods must be used to reduce the volume of waste that must be disposed.

Whereas recycling reduces the volume of disposed waste by reusing components of the MSW, recovery processes utilize the waste as a raw material for various feed streams. The South Carolina Energy Research and Development Center (SCERDC), in conjunction with the Department of Energy (DOE) will demonstrate and assist in the development of technologies that efficiently and effectively recycle, recover, and reuse MSW and industrial waste.

The benefits to be derived from the Research Development & Demonstration (RD&D) of MSW technologies (and management thereof) are far-reaching and include:



Benefits:

The first obvious benefit of recycling and recovery programs is the reduction in waste that must be landfilled. By developing and demonstrating technologies that utilize MSW and industrial waste as a feed stream, various advantages can be achieved; for example, production of synthetic fuels and chemicals, generation of electricity, and manufacturing of new environmentally friendly materials.

- Leveraging MSW technology development/demonstration with a landfill installation at the Savannah River Site in full compliance with Subtitle D of the Resource Conservation and Recovery Act (RCRA)

‣ Reduced MSW quantities and, hence minimal environmental impact

‣ Technology, product development, and demonstration with significant potential to fulfill the needs of nationwide and international markets

‣ Opportunity to strengthen DOE - Public (community) relations by maximizing effective land use and creating non-weapons related opportunities

Technology:

The Solid Waste Technology Program (SWTP) will evaluate, develop, and assist in the demonstration of natural, mechanical, chemical, and biological conversion processes. These processes will range from the typical compost facility to the latest combination of gasification and fuel cell systems. By combining innovative new technologies with new application of previously demonstrated ideas, the SWTP can effectively prove that MSW and industrial waste can become an asset instead of a debit.

Contacts:

The SCERDC is an applications based unit which focuses on energy, environmental, education, and economic issues in and for the state and the nation. For further information regarding this project, please contact:

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DOE's Federal Energy Technology Center supports the Environmental Management - Office of Science and Technology by contracting the research and development of new technologies for waste site characterization and cleanup. For information regarding this project, the DOE contact is:

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